

### **REMARKS**

Applicants respectfully request further examination and reconsideration in view of the arguments set forth fully below. In the Office Action mailed November 3, 2010, claims 1-39 have been rejected. In response, the Applicants have submitted the following remarks. Accordingly, claims 1-39 are still pending. Favorable reconsideration is respectfully requested in view of the remarks set forth fully below.

#### **Examiner Interview Summary**

On November 30, 2010 the undersigned and Examiner Valerie Lubin conducted a telephone interview. During the interview, the undersigned submitted that the Boukobza reference teaches a number of nodes in a system, wherein each node has an autonomous agent that is capable of managing one monitored parameter and forwarding that parameter on to the management node. It was further argued that the present application includes one proactive agent that can keep a plurality of counters for a number of parameters in a single system agent. Examiner Lubin understood this distinction but indicated that one skilled in the art would find our new structure obvious over the Boukobza reference, and indicated that a showing of nonobviousness gleaned from the Boukobza reference must be shown in order to obviate this rejection. In response, the undersigned has included additional arguments below showing that the present application and specifically the independent claim 1 is not obvious in light of the cited references. The Applicants respectfully thank the Examiner for her kind attention and willingness to interview this case. Should the Examiner have any questions upon review of this response, she is encouraged to contact the undersigned.

#### **Rejections Under 35 U.S.C. §103**

Claims 1-39 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,122,664 to Boukobza et al. (hereinafter Boukobza), in view of U.S. Pre-grant Pub. No. 2003/0009244 to Engleson et al. (hereinafter Engleson). The Applicants respectfully disagree with this rejection.

Structure of Present Application Not Obvious in Light of Boukobza

As stated previously during the interview, the Examiner indicates that one skilled in the art would find that the new structure of the present application is obvious in view of the Boukobza reference. Specifically, the Applicants respectfully submit that the polling step of the independent claim 1, including polling a set of data from the information system with a single proactive agent, is neither taught nor made obvious by the Boukobza and Engleson references.

At issue here is whether the single proactive autonomous agent of the present application, and the structure described and claimed in the present application, is obvious in light of the structure of Boukobza, where each node of Boukobza includes an autonomous agent.

The Applicants respectfully submit that there is an abundance of teaching in the Boukobza reference that indicate that the structure of the present application is indeed not obvious in light of Boukobza, and in fact, the Boukobza reference goes to great lengths to teach away from, indicating that such a structure and solution would indeed not be obvious in light of the Boukobza reference. For example, the system taught in the Boukobza reference is structured in a multi-node system having an autonomous agent in each node for a particular purpose. This autonomous agent in each node of the Boukobza reference allows the system of the Boukobza to monitor a particular machine having a particular protocol. These autonomous agents in each node of the Boukobza reference are also configured in order to filter and locally process information collected from each of these agents from the particular machine being monitored before sending that data on to the single management node. Given this specific structure, function and purpose of the autonomous agents of the Boukobza reference, it is submitted that the system and method of the present application would indeed not be obvious in light the Boukobza reference.

Referring to the specification of Boukobza, it is stated that "...each specific module measuring static and dynamic parameters particular to the object type it monitors and collecting said measurements, testing conditions on said parameters relative to predefined thresholds..." [Boukobza, Abstract] is the reason the Boukobza reference is structured in the way that it is. This is further reinforced in various parts of the Boukobza reference particularly in Col. 2, lines 20-25 and

39-46 as well as in Col. 3, lines 40-60. In sum, the Applicants respectfully submit that the present application and its structure of using a single proactive node would not be useful in solving the problems addressed and solved by the Boukobza reference, and therefore is not obvious in light of the Boukobza reference because the Boukobza reference requires a multi-node system each having an autonomous agent in order to monitor, filter information from, and manage information from a particular machine before that information is received by the management node. The structure and system of the present application would therefore not be obvious in light of the teachings of Boukobza.

The Applicants are hereby renewing the remainder of the arguments set forth in previous Office Action responses below.

Boukobza/Engleson Analysis

The Applicants wish to direct the Examiner to the transforming, monitoring, and comparing steps of the independent claim 1, and corresponding elements in the independent claim 18, and focus on the teachings of Boukobza to illustrate how the steps of the method of the present application are not taught by Boukobza. In this portion of the claim, the element sets forth "transforming the set of data into a plurality of counters". The claim then includes monitoring and recording values of parameters by one of these transformed counters. The counters are then compared to thresholds in order to determine when a designated representative should be notified. The disclosure for the concept of these counters is included in paragraphs 20-21 of the present application.

In reviewing the Office Action, and more particularly the cited portions of the Boukobza that the Examiner utilizes to show where the set of data is transformed into counters, and further where the values are monitored and recorded by one of the counters, and further comparing the values of the counters to thresholds, the Applicants find no support or mention of actual counters. In fact, nowhere in the Boukobza reference is the set of data transformed into a plurality of counters. After searching the specification of the Boukobza reference online, the Applicants respectfully submit that the word "counter" does not even appear in the entire specification of Boukobza.

Accordingly, the Applicants respectfully submit that Boukobza does not teach the transforming, monitoring, nor comparing steps, as described and claimed in the present application.

As stated in the Office Action, Boukobza does not recite a healthcare information system which comprises a plurality of customer information systems. Within the Office Action, it is stated that the Engleson reference does indeed include this teaching at paragraph 37. However, the Applicants respectfully disagree. Paragraph 37 teaches and discloses Figure 1, which is a hospital-wide information and care management system 30. This hospital-wide information and care management system 30 (management system 30) includes a local area network configured to be connected with and communicate with a file server 45, pharmacy computer, a nursing station 70, and bedside CPUs 80.

In short, the Engleson reference includes a healthcare information system that encompasses and communicates with a plurality of **hospital information systems**. However, nowhere in Engleson is it taught that a healthcare information system comprises a plurality of **customer information systems**. It is clear from the description in the specification of the present application, and throughout this Office Action Response and previous Office Action Responses, that the system of the present application includes a plurality of customer information systems, which are very different type systems and implemented in differing environments from those described and claimed in the Engleson reference, which include various, in-house hospital information systems for keeping track of patients within the hospital environment.

Accordingly, neither Boukobza, Engleson, nor their combination teach a healthcare information system including a plurality of customer information systems, nor the transforming of data into a plurality of counters, nor any of the other elements that include the counters. The Applicants have also included select previous arguments from Office Action Responses to other Office Actions in the past.

Referring first to the independent claim 1 and the Figure 1 of the present application, the Applicants respectfully submit that each customer information system 140 of the present application includes a memory device 142, a processor 144 and a single proactive notification agent 148. During the monitoring of the entire proactive support system 100 (referred to as a healthcare

information system in the claims), each single proactive notification in the customer information system 140 is able to communicate with any of a plurality of system module protocols. In other words, each proactive notification agent in each customer information system is diverse enough to communicate with all modules in the entire system. Accordingly, each customer information system 140 requires a single proactive notification agent 148 only. This has now been clearly set forth in the independent claims according to the above amendments.

Moving on to the Boukobza reference, it is clear from the lone figure in Boukobza and the abstract of the Boukobza reference that each management node (MN) in the information system has a corresponding autonomous agent (SAA). Therefore, instead of each customer information system only having a single proactive notification agent, the Boukobza reference utilizes a system where each management node in the customer system includes an autonomous agent. This is required in the Boukobza reference because each autonomous agent is specific to a different object type, and each specific module measuring static and dynamic parameters particular to the object type it monitors. Therefore, while the Boukobza reference includes notification agents that are able to communicate with a plurality of module protocols, the structure of the Boukobza reference requires that such autonomous agents are assigned to a particular object module.

Comparing Figure 1 to the figure of Boukobza illustrates how the structures of these two references are different. The amendments made to the independent claim 1 in the previous Office Action Response illustrate Figure 1 of the present application, and therefore the Applicants respectfully request that the structures of the Boukobza reference does not indeed teach the system and method of the present application.

The Applicants respectfully submit that the single proactive notification agent of the present application is structurally and functionally different than those agents found in the Boukobza reference. As stated in the previous Office Action response, the proactive notification agent of the present application is a single agent included in the customer healthcare information system that is capable of monitoring a plurality of object types of a plurality of nodes [Abstract]. This proactive notification agent is diverse enough to interface with a plurality of specific modules specific to the different object types or to a particular domain, each specific module measuring static and dynamic

parameters particular to the object type monitors and collecting said measurements, testing conditions on said parameters relative to predefined thresholds and possibly triggering actions associated with said tested conditions [Abstract]. Therefore, while the Boukobza reference includes agents configured in each of the nodes for communicating with a management node specifically for that node, the system and method of the present application includes a single proactive notification agent in the healthcare information system, that is capable of communicating with all nodes, regardless of object type, and regardless of protocol, format, etc.

In Boukobza, autonomous agents (SAA) are installed in each node ( $N_1, N_2 \dots N_n$ ), and each of these agents are configured to monitor its assigned node, to process the object types or domains in each of these nodes locally, or to feed back the information collected in each of these nodes to a graphical interface of a management node (MN) [Boukobza, Abstract]. Referring further to the Boukobza reference, the autonomous agents make "...impossible to assure...to measure specific parameters of each application, to test conditions on these parameters relative to the thresholds, and then to execute an action in order to warn of a problem, to reconfigure or to correct," [Boukobza, column 2, lines 39-65].

Furthermore, the autonomous agent SAA is "chiefly composed of a Generic Agent related to Specific Modules (SM1, SM2, ..., SMn), each of which is specific to an object type of to a particular domain, and of files, one of which is intended to contain the Basic Functions used," [Boukobza, column 4, lines 36 through column 5, line 18]. It is clear from these few citations that the autonomous agents SAA are inadequate, and further unable to function as the proactive notification agent of the present application, as these autonomous agents SAA cannot communicate with all of the modules of the system, but only with its Specific Module, "...each of which is specific to an object type of to a particular domain, ...".

As follows in Boukobza, each node is specific to each object type of that particular node, and therefore requires an autonomous agent. Accordingly, Boukobza does not teach the polling step, the notifying step, nor the monitoring step of the independent claim 1, nor these corresponding elements in the independent claim 18.

Claim 1 is directed to a method for proactively monitoring a healthcare information system, the healthcare information system having a plurality of customer information systems, the method comprising: configuring a memory device in each of the customer information systems of the healthcare information system, the memory device including a set of executable code, and executing the set of executable code with a processor configured in each of the customer information systems, such that when the code is executed, the following steps are performed with a single proactive notification agent in any of the plurality of customer information systems in the healthcare information system, wherein the proactive notification agent communicates with any of a plurality of system module protocols: polling a set of data from the healthcare information system with the proactive notification agent, transforming the set of data into a plurality of counters, monitoring one or more performance parameters of the healthcare information system by recording the values of the parameters by one of the plurality of counters, comparing the value of the counters to thresholds, and notifying a designated representative of the value of one of the plurality of counters exceeding one of the thresholds. As discussed above, neither Boukobza, Engleson, nor their combination teach this structure or functionality. For at least these reasons, the independent claim 1 is allowable over the teachings of Boukobza, Engleson and their combination.

Claim 18 is directed to a system for proactively monitoring a healthcare information system having a plurality of customer information systems, the system comprising: a memory device configured in each of the customer information systems of the healthcare information system, the memory device including a set of executable code, a processor configured in each of the customer information systems configured to execute the code, thereby effectuating the function of the following modules: a single notification agent in each of the customer information systems, wherein the notification agent polls a set of data from the healthcare information system in any of the plurality of customer information systems, wherein the proactive notification agent communicates with any of a plurality of system module protocols, and a plurality of counters, each of which monitors one of a multiplicity of performance parameters by recording the values of the one parameter, wherein the notification agent further notifies a designated representative of the value of one of said plurality of counters exceeding a threshold. As discussed above with respect to the

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independent claim 1, neither Boukobza, Engleson, nor their combination teach a single notification agent configured to poll a set of data from the hospital information system nor a plurality of counters produced when the agent transforms the set of data. Accordingly, the independent claim 18 is allowable over the teachings of Boukobza, Shipon and their combination.

Claims 2-17 and 19-39 are dependent upon the independent claims 1 and 18. As discussed above, the independent claims 1 and 18 are allowable over the teachings of Boukobza, Engleson, and their combination. Accordingly, claims 2-17 and 19-39 are also allowable as being dependent upon an allowable base claim.

For these reasons, Applicants respectfully submit that all of the claims are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at 414-271-7590 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,

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